

future generations can enjoy. Regeneration cuts mimic natural disasters such as ice, tornadoes, fires and floods that remove trees from forests.

**Why did you cut down all the trees and leave them in the woods?** The area was probably thinned to remove trees that were less beneficial to wildlife or too small to sell. This method of forest management is known as timber stand improvement (TSI). If TSI is not done, the forest becomes too thick and certain trees begin dying on their own.

**Why not let some of the trees die on their own?** By choosing which trees die, managers are able to leave trees that are best for wildlife, water quality and timber production. Because there is less competition for light and other resources, the trees left standing grow faster and have a better chance of survival.

**Isn't it wasteful to leave cut trees on the ground?** In certain cases, we issue special permits so downed trees can be used for firewood. In other cases, we leave cut trees on the ground to benefit the forest ecosystem. As trees decay, their nutrients provide building blocks for future forests. Downed trees also become homes and food for many organisms from fungi to salamanders to small mammals.

**Why did you mark the trees with blue or orange paint?** The paint you see is probably an area where the trees are scheduled to be cut for a timber sale. We use paint to mark the edges of different management units and to show loggers which trees to harvest.



Foresters collect many measurements to determine how to properly manage a forest.

**How will a timber sale create a healthy, sustainable forest?** The cut improves forest health by providing more growing space for the remaining trees. This benefits wildlife because, as a result of the additional space, the remaining trees produce more nuts. Since more sunlight is reaching the forest floor, herbaceous plants, shrubs and young trees begin to grow, providing habitat for a greater diversity of wildlife.

**Why did you cut a ring around those trees?** Cutting a ring around selected trees is known as girdling. The tissue that transports water and nutrients from the roots to the rest of the tree is found just under the bark. Girdling severs this tissue and kills the tree. By removing selected trees from competition with other trees for light, water and nutrients, we ensure the remaining trees are as healthy as possible.

**Why not just cut them down?** Girdling is quicker, easier and cheaper than traditional logging methods. Also, because the only equipment needed is a person with a chainsaw, erosion and soil compaction are not an issue.

**Does girdling benefit wildlife?** Unlike other forest management practices, girdling leaves dead trees standing upright. Dead trees provide dens for a variety of wildlife, such as squirrels, raccoons, woodpeckers and wood ducks. In fact, standing snags are critical to the survival of several endangered species, including Indiana bats.



Girdled trees provide dens for squirrels, raccoons and other wildlife.

**Why were all the trees cut along the edge of this field?** This is an example of edge feathering. Cutting trees removes shade from the edge of a field and allows weeds and shrubby vegetation to grow quickly. Shrubs and weeds provide food and cover for many kinds of wildlife, including bobwhite quail.

**Why did you leave the tops of the trees?** Shrubs and grasses that grow through the tops of downed trees provide excellent cover for quail, rabbits and other wildlife. Treetops also return nutrients to the soil as they decay.

90-YEAR-OLD  
REGENERATION CUT  
20-YEAR-OLD  
REGENERATION CUT  
8-YEAR-OLD  
REGENERATION CUT  
3-YEAR-OLD  
REGENERATION CUT







**If used correctly, controlled burns can keep forests healthy and promote wildlife.**

**This area appears to have burned. Was there a wildfire?** It's possible a wildfire occurred, but more likely it was a controlled burn. Unlike wildfires, controlled burns are set with safety precautions in place and specific management goals in mind. Controlled burns maintain healthy ecosystems and promote wildlife. Managers set fires at different times of the year to reduce certain plants and increase others, including native grasses, wildflowers and shrubs.

**Aren't fires bad for forests?** It depends on how the fire is used. Over thousands of years, Missouri's forests have adapted to periodic fires. Controlled fire or other management tools are needed to replace natural fires that once maintained the health of our forests. Savannas, the grassy transition zones between prairie and forest, need periodic fire to thrive. Without fire, savannas are gradually taken over by shrubs and poor-quality trees. A fire that is incorrectly used, however, can damage a forest. Landowners should seek professional advice before using fire as a management tool.

## FREQUENTLY ASKED QUESTIONS ABOUT FOREST MANAGEMENT

**T**he goal of forest management is to create healthy, sustainable forests. Healthy forests provide wildlife habitat, recreational opportunities, improved water and air quality, and timber. Sustainable forests ensure future generations reap the same benefits from forests that we do today.

Forest management is different from timber management. Timber management focuses on growing trees for lumber, paper and other consumer products. Forest management goes beyond this to consider how management will affect all parts of the forest—the soil, water, plants and animals—not just the trees.

This brochure will answer some frequently asked questions about forest management practices.

**Why did you cut down all the trees?** This is probably a regeneration cut, also called a clear cut. Although it might look unsightly to you and me, it provides benefits to wildlife, the forest and the economy. Its purpose is not to remove trees, but to start a new forest to replace older, dying trees.

**How do regeneration cuts benefit wildlife?** Different wildlife species prefer different growth stages of a forest. By cutting down small patches of trees—usually less than 20 acres each—managers create a diverse mixture of tree heights, densities and ages across the entire forest. This provides habitat for a variety of wildlife species. For example, regeneration cuts quickly grow into dense, shrubby thickets favored by quail, rabbits and songbirds.

**You're cutting down trees. How can this benefit the forest?** Older forests have a dense canopy that cuts off sunlight to the forest floor. Seedlings of many species such as oaks, hickories and pines don't grow well in shade. Regeneration cuts remove the canopy and provide sunlight to young seedlings. Even though it seems we've cut down all the trees, if you take a closer look you'll find plenty of young oaks and hickories that have a better chance of survival as a result of the cut.

Although they live for hundreds of years, trees eventually succumb to old age. Regeneration cuts mix up the ages of trees across the landscape. This ensures a mix of young and old trees in our forests to provide habitat for different types of wildlife. It also prevents a whole forest from dying of old age.



**Forest management provides habitat for wildlife, including deer, turkeys and quail.**

**Don't regeneration cuts cost a lot and cause soil erosion?** No matter what type of forest management we do, care is taken to prevent erosion and protect watersheds. When compared to other management practices, regeneration cuts are easier on the environment and cheaper for taxpayers. Unlike practices that remove trees from a stand over many years, regeneration cuts remove all the trees at once. Consequently, logging machinery is present for a shorter period, which results in less erosion and compaction. It's also less costly and easier to monitor with a small staff of forest managers.

**How long will it look like this?** Not very long. You might think of a regeneration cut as a way to set back Mother Nature's clock. As natural succession occurs, harvested areas will gradually grow back into a beautiful and healthy forest that